

Vandekerkhove, K. et al. (2009): When nature takes over from man: Dead wood accumulation in previously managed oak and beech woodlands in North-western and Central Europe. Forest Ecology and Management 258(4): 425-435.

Reference: Vandekerkhove, Kris, Luc De Keersmaecker, Norbert Menke, Peter Meyer, Pieter Verschelde (2009): When nature takes over from man: Dead wood accumulation in previously managed oak and beech woodlands in North-western and Central Europe. Forest Ecology and Management 258(4): 425-435.

Short reference: Vandekerkhove et al. (2009)

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Abstract

The accumulation of dead wood and its characteristics are analysed in forests that have been withdrawn from regular silvicultural management and left unmanaged between 10 and 150 years ago. These forests are dominated by beech (*Fagus sylvatica*) and oak (*Quercus robur* and *Quercus petraea*) and located in the lowlands of North-western and Central Europe.

The total volumes of dead wood ranged from 6 to nearly 500 m³/ha¹, with a median value of 53 m³/ha. The average accumulation rate ranged from <0.1 to 19 m³/ha/year. Variation was significantly higher in beech- than in oak-dominated forests. The variables and factors influencing dead wood volumes and accumulation rates were tree genus, stand age at the time of the onset of non-intervention, and the interaction between geographical location and tree genus. In beech-dominated stands, the ratio of lying to total dead wood was more or less constant at 75%; in oak-dominated stands, this ratio was related to the length of time non-intervention had occurred, rising from <50% in recently assigned areas to 75% in the long-established sites. It is concluded that in the absence of major disturbances, dead wood accumulation in man-made forests left to develop freely is a slow process. It may take a very long time to achieve the average amount and dynamic steady state of dead wood as described for virgin forests in Central Europe.

habitat: oak-hornbeam forests, beech forests

habitat: swamp and riverine forests

stand structure

forest structure: stand

forest history

deadwood

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